Farenheit

T-7020CMM

7-inch Wide Screen Fully Automatic
Roof Mount TFT-LCD Color Display



USER'S MANUAL

Before operating the unit, please read the instructions carefully.

Ver.1

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1. WELCOME

Thank you for the purchase of the Fully Automatic Roof Mount Color Display. Before operating the unit, please read this manual thoroughly and retain it for future reference.

2. INTRODUCTION

The unit has the following features:

- Built-in 7" wide -screen color TFT-LCD panel
- Compatible with NTSC and PAL system
- 16:9 aspect ratio
- Brightness: 350 cd/m^2
- High contrast TFT- LCD
- Multi video display mode
- Display format: 1440 X 234 dots
- Motorized panel angle adjustment
- Adjustable Color/Contrast/Brightness/Tint
- Built-in Dome Light
- IR Stereo Transmitter with Wireless Headphone
- IR Remote Control
- Automotive startup protection
- Panel auto close after 4 seconds since ignition key removed (ACC OFF)
- Last angle memory
- 2 AV Input
- 1 AV Output
- On screen display

3. SAFETY PRECAUTIONS

- The unit is designed for using in DC12V, negative ground battery.
- Do not operate the unit in any way other than described within this manual. Failure to follow the instructions within the manual will invalidate your warranty.
- Do not use where the display is visible to driver to avoid the risk of serious injury of the driver or others.
- Be careful not to run down the car battery while using the unit with the car engine stopped.
- Do not disassemble or alter the unit in any way. Failure to do so can cause damage to the unit and invalidate your warranty.
- Never clean the surface of the screen with chemical solvent or corrosive detergent, which may cause permanent damage to the TFT LCD screen.
- Avoid installing the unit wherever is under direct sunlight or near hot air vent. Please note that the normal working temperature of the unit is between 0°C to 45°C. If the internal temperature of the vehicle is extremely high, a short cooling down period is necessary before operating the unit.
- If the inside of the car is very cold and the display is used soon after switching on the heater, moisture may form on the panel of the unit. Turn off the unit immediately! Failure to do so may cause the internal components to short. Allow the unit to rest for about one hour to allow the condensation to disappear before continue operation.
- In extremely cold temperatures, the movement of the picture may be slow and the picture may be dark. It is not a malfunction. The unit will work normally once it reaches its operating temperature.
- Small black and shiny dots inside the liquid crystal panel are normal for liquid crystal product.
- Do not drop or hit the LCD panel with a hard object, as it may cause permanent damage to the LCD panel. If you come into contact with the fluid, do flush and clean effected areas with plenty of water and seek medical attention immediately.
- Due to different car specifications, please kindly ensue that the display is suitable located and not obstructing the rear view mirror and air-conditioning vent.
- Use only the supplied screws to fix the display Metal Mounting Plate.
- Kindly refer to authorized dealers if you get any questions.

⚠ The unit is fully automatic. Do not attempt to adjust the angle of LCD panel or open/close it by hand, which may cause damage to motor driver or gear system.

Before installing this display system, please check that you are incompliance with your local traffic rules and regulations.

4. DESCRIPTION

The unit is a Full-Featured Automatic Roof Mount 7" TFT-LCD Color Display that can be used as a stand-alone display, or can be integrated into a mobile multimedia system.

Automotive Startup Protection

Screen power will be turned off while car starting and resume operation after 1 second since the car is started successfully.

Panel auto close

Panel will be closed automatically after 4 seconds since the ignition key is removed. (ACC OFF)

Last angle memory

The panel will return to its last angle position after being powered on.

Backlit Buttons

The backlight of buttons can be setup ON/OFF/30S(1-30S adjustable) under MENU.
When it is set ON, button backlight will run continuously.
When it is set 30S, button backlight will light up whenever a button is pressed. The duration of the lighting can be set from 1 to 30 seconds.
When it is set OFF, button backlight will never light up.

5. PACKAGE CONTENTS

Appearance	Parts Name	Quantity
	LCD Display	1
	IR Headphone (optional)	1
	IR Remote Control w/Battery	1
	4 Pin Power Source Cable	1
	AV Input Cable	2
	AV Output Cable	1
	Metal Mounting Plate	1
	Mounting Screws	12
	User's Manual	1
	3A/125V Fuse	1

Make sure only the accessories shipped together with the unit are used. The use of any accessories except for those provided might result in damage to the unit.

6. ELECTRICAL CONNECTION

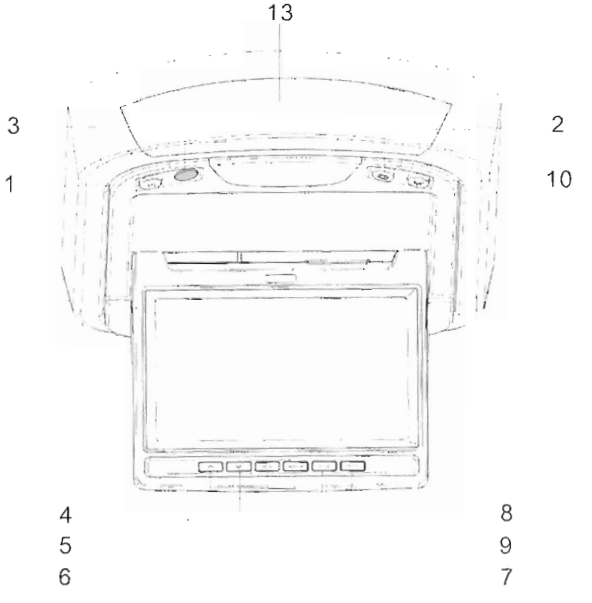
4PIN POWER SOURCE CABLE

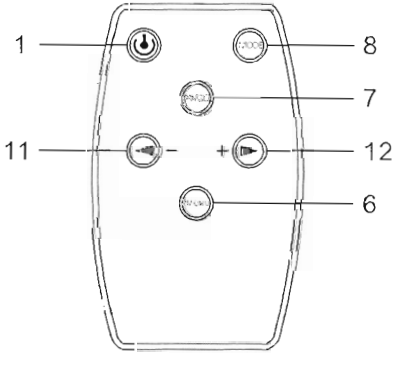
Color Code	Function
Black	Ground
Red	ACC
Yellow	+ 12V
One pin is not used.	

AV Input/Output Cable

Color Code	Function
Yellow	Video
Red	Audio Right
White	Audio Left

7. BUTTON FUNCTION





REMOTE CONTROL

1. Power (⏻)
2. Door Light ON/OFF Button ()
3. Remote Sensor
4. Up Button(∧)
5. Down Button(∨)
6. Menu Button
7. Angle Button
8. Mode Button
9. Wide Button
10. Dome Light Button()
11. /– Reduce Button
12. /+ Increase Button
13. IR Transmitter

1) **Power** ⏻

At first, make sure the engine is running. Then press the power switch. The LED of the power switch will change to Green from Red and the LCD display open automatically and turn on. Pressed again, the display is switched off and back to the original position.

Note: 1. Do not interfere the movement of the LCD display as it may damage motor driver or the gear system.

2. The LCD display will shut off automatically when ignition key is turned off.

2) **Door Light ON/OFF Switch**

The button activates the door sensor to switch door lights.

Note: 1. This function can be operational only when the blue or white wire of the dome light is connected to the door sensor.

2. The door light will shut off after the car door closed.

3) **Remote Sensor**

4) **(Up Button)**

Under "MENU", it is for increasing the system value.

While "ANGLE ON", it is for adjusting the panel angle.

Normally, it is for adjusting the brightness of screen backlight.

5) **(Down Button)**

Under "MENU", it is for decreasing the system value.

While "ANGLE ON", it is for adjusting the panel angle.

Normally, it is for adjusting the brightness of screen backlight.

6) **MENU (Menu Button)**

When the display is turned on, the MENU button can be used for switching and selecting the item of NEXTPAGE / COLOR / CONTRAST / BRIGHTNESS / TINT / RESET AND PREV PAGE / DISP MODE /VIDEO MODE / FM FREQ /NTSC PAL/ BUZZER/B. BACKLIT for adjustment. Press MENU button continuously or just hold it to select the function under menu. Values can be changed by pressing button "+" and "–"continuously or keep on it, "0~30" adjustable.

The button can also be used to select menu option.

7) **ANGLE (Angle Button)**

Press ANGLE to activate the button with "angle on", then adjust the panel angle with button "+"/"–" on remote control or "∧"/ "∨" on the panel.

The button can also be used to select menu option.

With ANGLE button on, press "∨" button on the panel or "–" button on remote control, panel shall be moving forward.

With ANGLE button on, press "∧" button on the panel or "+" button on remote control, panel shall be moving backward.

Press "ANGLE" button, "ANGLE ON" will be shown on the left top of screen. If there is no angle adjustment in 5 seconds or press "ANGLE" button again, it will be disappeared on the screen and "ANGLE" function off.

⚠ *Do not attempt to use force to adjust the LCD display angle, which might cause damage to the gear assembly.*

8) **MODE** (Auxiliary Input)

Select input signal **AV 1** or **AV 2** with **MODE** button.

9) **WIDE** (Display Mode)

Press **WIDE** button to adjust the screen size, which switches in the following sequence with the button activated:

REMARK: system default is **FULL.**

Display Mode	Display	Note
Full		Input video signals 16:9 picture is fully displayed on screen.
Normal		When 4:3 picture is played on wide screen, black bands appear on both side of the picture.
Wide		Input video signals are displayed in full screen. (Horizontal Modification)

10) **Dome Light Button**

Press the button to have the dome light switch on/off.

11) ◄ / – **Reduce Button**
Under "MENU", it is for decreasing the system value.
While "ANGLE ON", it is for adjusting the panel angle.
Normally, it is for adjusting the brightness of screen backlight.

12) ► / + **Increase Button**
Under "MENU", it is for increasing the system value.
While "ANGLE ON", it is for adjusting the panel angle.
Normally, it is for adjusting the brightness of screen backlight.

13) IR Transmitter
It is for signal transmission to IR headphone.

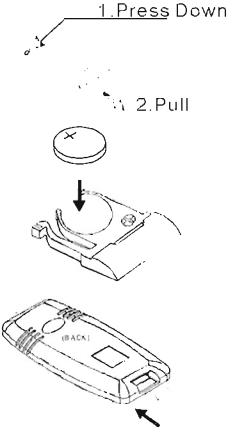
8. REMOTE CONTROL

Inside the vehicle, simply aim the IR Remote Control directly at the unit, or video source with an IR input and press any desired button for better effects.
Notes:

- Put the IR Remote Control from no further than 3 Meter on either side of the sensor.
- Direct sunlight or very bright light reduces sensitivity to the IR remote signal commands. Be sure the display is not located in direct sunlight.
- Obstruction between the remote sensor and remote control may disrupt reception.

9. BATTERY REPLACEMENT

If the remote control does not function correctly or the operating range shortened, please replace the old battery with a new one.



1. Press the hole on the backside of remote control with a tool and keep it as arrow 1. Pull out the battery cover as arrow 2 instructed.
2. Replace with a new battery.
 Place a new lithium battery with the (+) side up.
3. Push the cover back.
 Push back the cover until the locking sound is heard.

Notes:

1. *Dispose used battery properly.*
2. *Do not misuse battery by shorting the positive "+" and negative "–" terminal or throw it into fire. Overheating may cause battery to explode and a fire hazard.*
3. *Battery and battery holder can be a choking hazard. Keep the remote control unit away from young children.*

10. INSTALLATION INSTRUCTIONS

- To prevent short circuits, remove the key from the ignition and disconnect the terminal of battery.
- Make the proper input and output cable connections for each unit.
- Connect the wiring harness cables in the following order: ground wire, battery wire, ignition wire. Connect the wiring harness connector with the display unit.
- Reconnect the terminal of the battery.

Notes for installation:

- Do remember to connect the red wire to the ACC of the ignition switch. Or the battery charge might be drained off prematurely.
- If the fuse is broken, firstly make sure that the cables have not caused a short circuit, and then replace the old fuse with a new one of the same rating.
- Do not have unconnected cables or terminals touch the metal on the car or any other conducting material.
- To prevent short circuits, do not remove the caps from unused terminals or from the ends of the unconnected cables.
- After the display unit is installed, check and make sure the brake lamps, blinkers, wiper, etc. on the vehicle are working properly.
- Insulate unconnected wires with vinyl tape or other similar material.

11. TROUBLESHOOTING

Problem	Cause	Solution
No picture when the display is turned on.	1. Power wire is connected improperly or fuse blown. 2. System cable is not on right position.	1. Check the power wire and replace the fuse. 2. Check system cable or replace a new one.
Blurry picture on the screen.	1. Interfered by short distanced strong interference. (e.g. high voltage wire, transformation station or aircraft etc...)	The reception of signal will get better when leaving the range of interference.
No function on the remote control (or operating distance is shortened).	1. The battery of remote control has exhausted. 2. Remote control destroyed.	1. Change a new rating battery. 2. Contact with dealer and change a new remote control.
The picture on the screen is dark.	1. The equipment locates at a low temperature area. 2. BRIGHTNESS is set too dark.	1. This is the character of LCD display in low temperature, it will restore to normal brightness after starting the display for few minutes. 2. Check BRIGHTNESS adjustment.
No sound can be heard from the IR wireless headphone.	1. It was not turned on. 2. The battery in it is run out. 3. There is object blocking the transmitting module or beyond the effective receiving area.	1. Turn on the headphone; its power indicator shall turn on in red. 2. Replace a new battery. 3. Remove the blocking object and back to the right area.

12. PICTURE ADJUSTMENTS

To adjust the picture, use the menu button to select the menu features you would like to adjust. Adjustment selections are as follows. The values of selected feature can be adjusted by pressing the "+" and "–" button on the remote control or "**∧**" and"**∨** " button on the panel.

Page 1:

NEXT PAGE	NEXT PAGE: Next page
COLOR_ _ _ _ _ 15	COLOR: Color adjustment
CONTRAST_ _ _ 20	CONTRAST: Contrast adjustment
BRIGHTNESS _ _ 25	BRIGHTNESS: Brightness setting
TINT_ _ _ _ _ _ _ 15	TINT: Adjustment to color saturation
RESET	RESET: Reset menu to default value

Page 2:

PREV PAGE	PREV PAGE: Previous page
DISP MODE_ _ _ _ _ _ FULL	DISPLAY MODE: Select Full/Normal/Wide mode
VIDEO MODE _ _ _ _ _ _DOWN	VIDEO MODE: Select UP/DOWN to flip image
NTSC PAL _ _ _ _ _ _ _ AUTO	NTSC PAL: Select NTSC, PAL or AUTO format
BUZZER _ _ _ _ _ _ _ _ SOUND1	Buzzer: Select Sound1/Sound2/Sound3/Silent
B. BACKLIT _ _ _ _ _ _ ON	Button Backlit: Select ON/OFF/30S (1-30S adjustable)

13. LCD PANEL MAINTENANCE

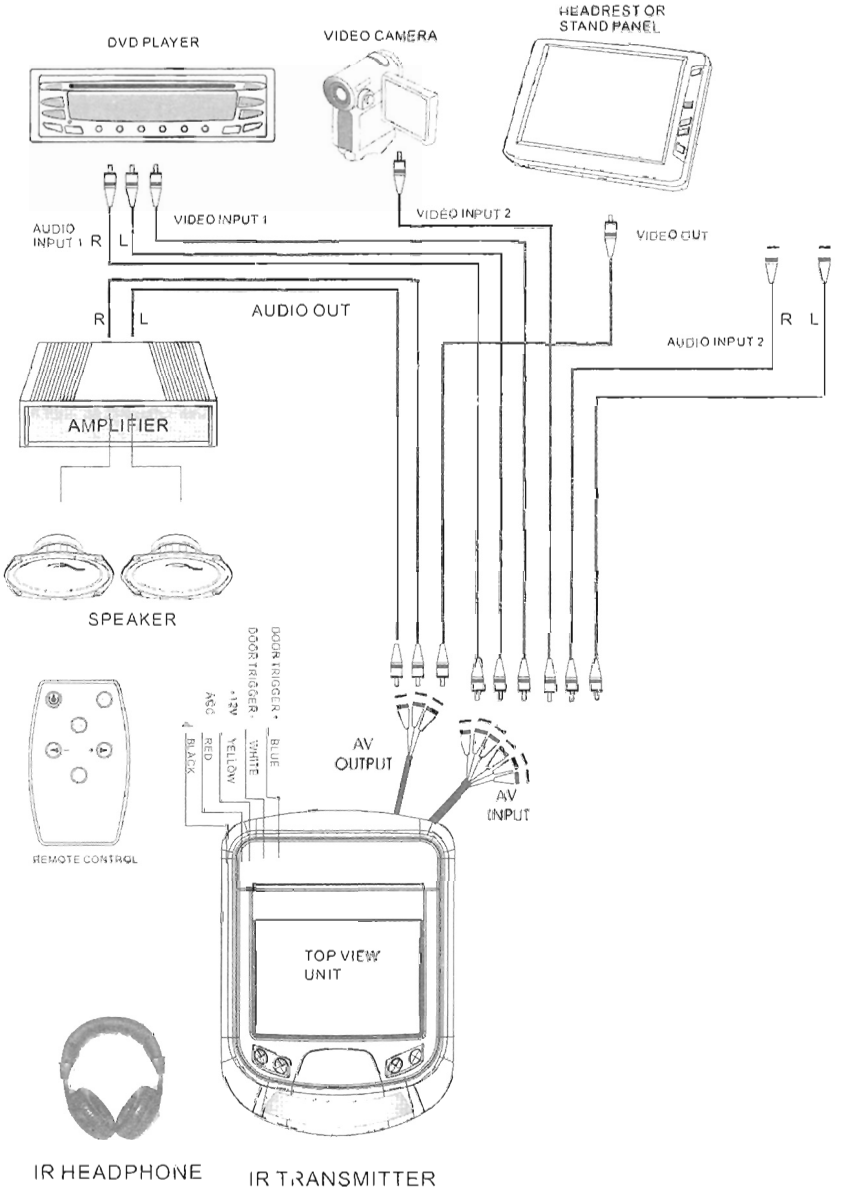
- Wipe off any dust gently with a soft, dry cloth.
- The surface is easily scratched; do not rub it with hard objects.
- Do not use any chemical solvent, cleaning agent or corrosive detergent to clean away dirt on the surface of the screen.

14. SPECIFICATIONS

General Specifications

Power Source:	Car Battery (DC 11-14V)
Operating Voltage:	DC 12V
Mechanism:	Full-Automatic Open / Close
Display Angle:	Vertical Adjustable: Up/Down < 110°
Operating Current:	1.5A(Dome Light Off), Typical
Crystal Dome Light:	5W x1 with door sensor connection
Operating Temperature:	0°C to 45°C
Storage Temperature:	-30°C to +80°C
Dimensions:	369.7 X 258.7 X 41.4mm (LxWxH)
Gift Box Size:	433 X 306 X 105mm (LxWxH)
Net Weight:	3.0 Kg
Gross Weight:	4.5 Kg
Carton Size:	640 X 460 X 250mm (LxWxH)
Carton Cubic Feet:	4sets/master carton/2.6'

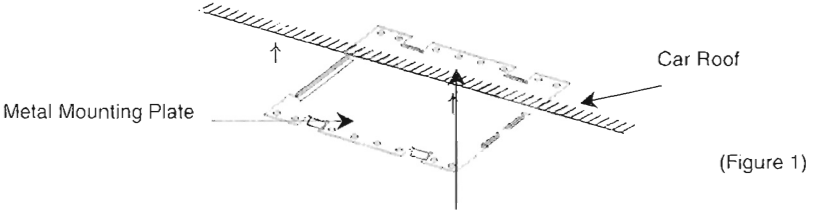
15.CONNECTION OF DISPLAY AND PERIPHERAL EQUIPMENTS



16. INSTALLATION STEPS

Step 1: Metal Mounting Plate Mounting

Select the screw by length which best applies to your vehicle contained in the package contents. Screw the Metal Mounting Plate to the Car Roof. (See Figure 1) Please remember not to cover the opening of original dome light.



(Figure 1)

Step 2: Cable Routing

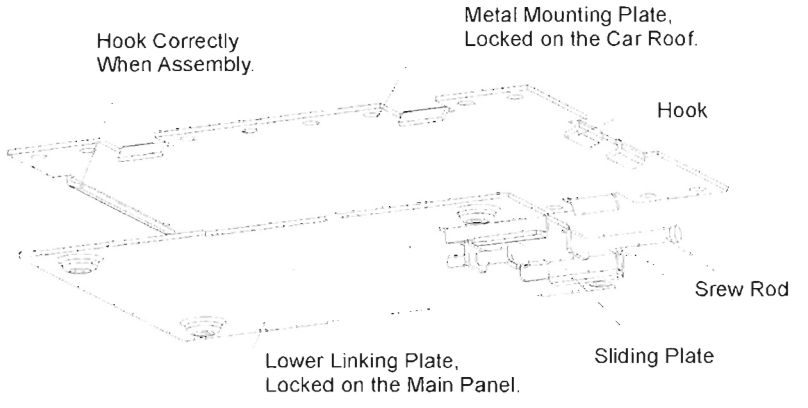
Pull out the AV Input/Output Cable, 4 Pin Power Cable from the opening of original Dome Light.

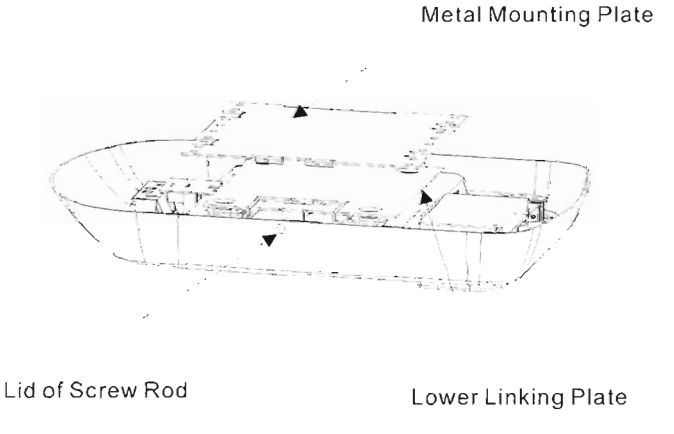
Step 3: Cable Connection

Connect the extension cable of AV Input/Output Cable, 4Pin Power Cable to the unit.

Step4: LCD Unit Mounting

Remove the lid of screw rod on the side of unit. Hook the Lower Linking Plate on the LCD unit to the Metal Mounting Plate and rotate the screw rod clockwise, till the sliding plate is hooked tightly. (See Figure2) Then put the screw lid back.





(Figure 2)

Step 6:

Please have a check and make sure the unit is installed properly before operation.